CLAIM AMENDMENTS

1. (original): A method for monitoring 158P1D7 gene products in a biological sample from a patient who has or who is suspected of having cancer, the method comprising:

determining the status of 158P1D7 gene products expressed by cells in a tissue sample from an individual;

comparing the status so determined to the status of 158P1D7 gene products in a corresponding normal sample; and,

identifying the presence of aberrant 158P1D7 gene products in the sample relative to the normal sample.

2. (original): A method of monitoring the presence of cancer in an individual comprising: performing the method of claim 1 whereby the presence of elevated 158P1D7 mRNA or protein expression in the test sample relative to the normal tissue sample provides an indication of the presence or status of a cancer.

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3. (original): The method of claim 2, wherein the cancer occurs in a tissue set forth in Table I.

4. (original): A composition comprising:

a substance that modulates the status of 158P1D7 or a molecule that is modulated by 158P1D7 and thereby modulates the status of a cell that expresses 158P1D7.

5. (original): The composition of claim 4, further comprising a pharmaceutically acceptable carrier.

6. (original): A pharmaceutical composition that comprises the composition of claim 4 in a human unit dose form.

7. (original): A composition of claim 4 that comprises a 158P1D7-related protein.

8. (original): A composition of claim 4 that comprises an antibody or fragment thereof that specifically binds to a 158P1D7-related protein.

9. (original): A composition of claim 4 that comprises a polynucleotide that encodes a single chain monoclonal antibody that immunospecifically binds to an 158P1D7-related protein.

10. (original): A composition of claim 4 that comprises a polynucleotide comprising a 158P1D7-related protein coding sequence.

11. (original): A composition of claim 4 that comprises an antisense polynucleotide complementary to a polynucleotide having a 158P1D7 coding sequence.

12. (original): A pharmaceutical composition of claim 4 that comprises a ribozyme capable of cleaving a polynucleotide having 158P1D7 coding sequence and a physiologically acceptable carrier.

13. (original): A method of inhibiting growth of cancer cells that expresses 158P1D7, the method comprising:

administering to the cells the composition of claim 4.

14. (original): A method of claim 13 of inhibiting growth of cancer cells that express 158P1D7, the method comprising steps of:

administering to said cells an antibody or fragment thereof that specifically binds to a 158P1D7-related protein.

15. (original): A method of treating a patient with a cancer that expresses 158P1D7, the method comprising steps of:

administering to said patient a vector that comprises the composition of claim 9, such that the vector delivers the single chain monoclonal antibody coding sequence to the cancer cells and the encoded single chain antibody is expressed intracellularly therein.

16. (original): A method of claim 13 of inhibiting growth of cancer cells that express 158P1D7, the method comprising steps of:

administering to said cells a polynucleotide comprising a 158P1D7-related protein coding sequence.

17. (original): A method of claim 13 of inhibiting growth of cancer cells that express 158P1D7, the method comprising steps of:

administering to said cells an antisense polynucleotide complementary to a polynucleotide having a 158P1D7 coding sequence.

18. (original): A method of treating a patient with a cancer that expresses 158P1D7, the method comprising steps of:

identifying that the patient has a cancer the cells of which express 158P1D7;

administering to the patient a pharmaceutical composition of claim 12 that comprises a ribozyme capable of cleaving a polynucleotide having a 158P1D7 coding sequence.

19. (currently amended): A method of generating a mammalian immune response directed to 158P1D7, the method comprising:

exposing cells of the mammal's immune system to ~~an immunogenic~~ at least a portion of an 158P1D7-related protein, comprising a T cell epitope or a B cell epitope whereby an immune response is generated to 158P1D7.

20. (original): A method of delivering a cytotoxic agent to a cell that expresses 158P1D7, said method comprising:

providing a cytotoxic agent conjugated to an antibody or fragment thereof that specifically binds to 158P1D7; and,

exposing the cell to the antibody-agent conjugate.

21. (currently amended): A method of inducing an immune response to a 158P1D7 protein, said method comprising:

providing a 158P1D7-related protein that comprises at least one T cell epitope or at least one B cell epitope;

contacting the epitope with an immune system T cell or B cell respectively, whereby the immune system T cell or B cell is induced.

22. (original): The method of claim 21, wherein the immune system cell is a B cell, whereby the induced B cell generates antibodies that specifically bind to the 158P1D7-related protein.

23. (original): The method of claim 21, wherein the immune system cell is a T cell that is a cytotoxic T cell (CTL), whereby the activated CTL kills an autologous cell that expresses the 158P1D7 protein.

24. (original): The method of claim 21, wherein the immune system cell is a T cell that is a helper T cell (HTL), whereby the activated HTL secretes cytokines that facilitate the cytotoxic activity of a CTL or the antibody producing activity of a B cell.

25. (original): An antibody or fragment thereof that specifically binds to a 158P1D7-related protein.

26. (original): The antibody or fragment thereof of claim 25, which is monoclonal.

27. (original): A recombinant protein comprising the antigen-binding region of a monoclonal antibody of claim 26.

28. (original): The antibody or fragment thereof of claim 25, which is labeled with a detectable marker.

29. (original): The recombinant protein of claim 27, which is labeled with a detectable marker.

30. (original): The antibody fragment of claim 25, which is an Fab, F(ab')2, Fv or sFv fragment.

31. (original): The antibody of claim 25, which is a human antibody.

32. (original): The recombinant protein of claim 27, which comprises murine antigen binding region residues and human constant region residues.

33. (original): A non-human transgenic animal that produces an antibody of claim 25.

34. (original): A hybridoma that produces an antibody of claim 26.

35. (original): A single chain monoclonal antibody that comprises the variable domains of the heavy and light chains of a monoclonal antibody of claim 26.

36. (original): A vector comprising a polynucleotide that encodes a single chain monoclonal antibody of claim 35 that immunospecifically binds to a 158P1D7-related protein.

37. (original): An assay for detecting the presence of a 158P1D7-related protein or polynucleotide in a biological sample from a patient who has or who is suspected of having cancer, comprising steps of:

contacting the sample with an antibody or another polynucleotide, respectively, that specifically binds to the 158P1D7-related protein or polynucleotide, respectively; and,

determining that there is a complex of the antibody and 158P1D7-related protein or the another polynucleotide and 158P1D7-related polynucleotide.

38. (original): The assay in accordance with claim 37 for detecting the presence of a 158P1D7-related protein or polynucleotide in a biological sample from a patient who has or who is suspected of having cancer, comprising the steps of:

obtaining a sample from a patient who has or who is suspected of having cancer.

39. (original): The assay of claim 37 for detecting the presence of an 158P1D7 polynucleotide in a biological sample, comprising:

contacting the sample with a polynucleotide probe that specifically hybridizes to a polynucleotide encoding an 158P1D7-related protein having the amino acid sequence SEQ ID NO.: 657; and,

detecting the presence of a hybridization complex formed by the hybridization of the probe with 158P1D7 polynucleotide in the sample, wherein the presence of the hybridization complex indicates the presence of 158P1D7 polynucleotide within the sample.

40. (original): An assay for detecting the presence of 158P1D7 mRNA in a biological sample from a patient who has or who is suspected of having cancer, said method comprising:

(a) producing cDNA from the sample by reverse transcription using at least one primer;

(b) amplifying the cDNA so produced using 158P1D7 polynucleotides as sense and antisense primers, wherein the 158P1D7 polynucleotides used as the sense and antisense primers are capable of amplifying the 158P1D7 cDNA contained within the plasmid as deposited with American Type Culture Collection as Accession No. (to be assigned); and

(c) detecting the presence of the amplified 158P1D7 cDNA.

41. (original): A composition comprising a polynucleotide from position number 23 through number 2548 of SEQ ID NO.: 656.

42. (original): The composition of claim 41, wherein T is substituted with U.

43. (original): A composition comprising SEQ ID NO.: 656.

44. (original): The composition of claim 43, wherein T is substituted with U.

45. (original): A composition comprising a polynucleotide that encodes an 158P1D7-related protein that is at least 90% homologous to the entire amino acid sequence shown in SEQ ID NO.: 657.

46. (original): An analog peptide of eight, nine ten or eleven contiguous amino acids of SEQ ID NO.: 657

47. (original): A polynucleotide that encodes an analog peptide of claim 46.

48. (original): The composition of claim 45, wherein the polynucleotide encodes an 158P1D7-related protein that is at least 90% identical to the entire amino acid sequence shown in SEQ ID NO: 657.

49. (original): A composition comprising a polynucleotide that encodes at least one peptide set forth in Tables V-XVIII.

50. (original): A composition comprising a polynucleotide that encodes a peptide region of at least 5 amino acids of SEQ ID NO.: 657 in any whole number increment up to 841 that includes an amino acid position selected from: an amino acid position having a value greater than 0.5 in the Hydrophilicity profile of Figure 11, an amino acid position having a value less than 0.5 in the Hydropathicity profile of Figure 12; an amino acid position having a value greater than 0.5 in the Percent Accessible Residues profile of Figure 13; an amino acid position having a value greater than 0.5 in the Average Flexibility profile on Figure 14; or an amino acid position having a value greater than 0.5 in the Beta-turn profile of Figure 15.

51. (original): A composition comprising a polynucleotide that is fully complementary to a polynucleotide of claim 41.

52. (original): A composition comprising a polynucleotide that is fully complementary to a polynucleotide of claim 42.

53. (original): A composition comprising a polynucleotide that is fully complementary to a polynucleotide of claim 43.

54. (original): A composition comprising a polynucleotide that is fully complementary to a polynucleotide of claim 44.

55. (original): A composition comprising a polynucleotide that is fully complementary to a polynucleotide of claim 45.

56. (original): A composition comprising a polynucleotide that is fully complementary to a polynucleotide of claim 48.

57. (original): A composition comprising a polynucleotide that is fully complementary to a polynucleotide of claim 49.

58. (original): A composition comprising a polynucleotide that is fully complementary to a polynucleotide of claim 48.

59. (original): A composition comprising a polynucleotide that encodes a 158P1D7-related protein whose sequence is encoded by the cDNAs contained in the plasmid designated p158P1D7- Turbo/3PX deposited with American Type Culture Collection as Accession No. (to be assigned).

60. (original): A composition comprising a polypeptide at least 90% homologous to SEQ ID NO.: 657.

61. (original): The composition of claim 60, wherein the polypeptide is at least 90% identical to SEQ ID NO.: 657.

62. (original): The composition of claim 61, wherein the polypeptide comprises SEQ ID NO.: 657.

63. (original): A composition comprising a CTL polypeptide epitope from SEQ ID NO.: 657.

64. (original): The composition of claim 63, wherein the CTL epitope comprises a polypeptide selected from Tables V-XVIII.

65. (original): A composition comprising a peptide region of at least 5 amino acids of SEQ ID NO.: 657 in any whole number increment up to 841 that includes an amino acid position selected from: an amino acid position having a value greater than 0.5 in the Hydrophilicity profile of Figure 11, an amino acid position having a value less than 0.5 in the Hydropathicity profile of Figure 12; an amino acid position having a value greater than 0.5 in the Percent Accessible Residues profile of Figure 13; an amino acid position having a value greater than 0.5 in the Average Flexibility profile on Figure 14; or an amino acid position having a value greater than 0.5 in the Beta-turn profile of Figure 15.

66. (original): A composition comprising a 158P1D7-related protein whose sequence is encoded by the cDNAs contained in the plasmid designated p158P1D7- Turbo/3PX deposited with American Type Culture Collection as Accession No. (to be assigned).

67. (currently amended) The method of claim 19 wherein the exposing step comprises administering a nucleotide sequence that encodes said ~~protein~~ portion to the mammal whereby said ~~protein~~ portion is produced.